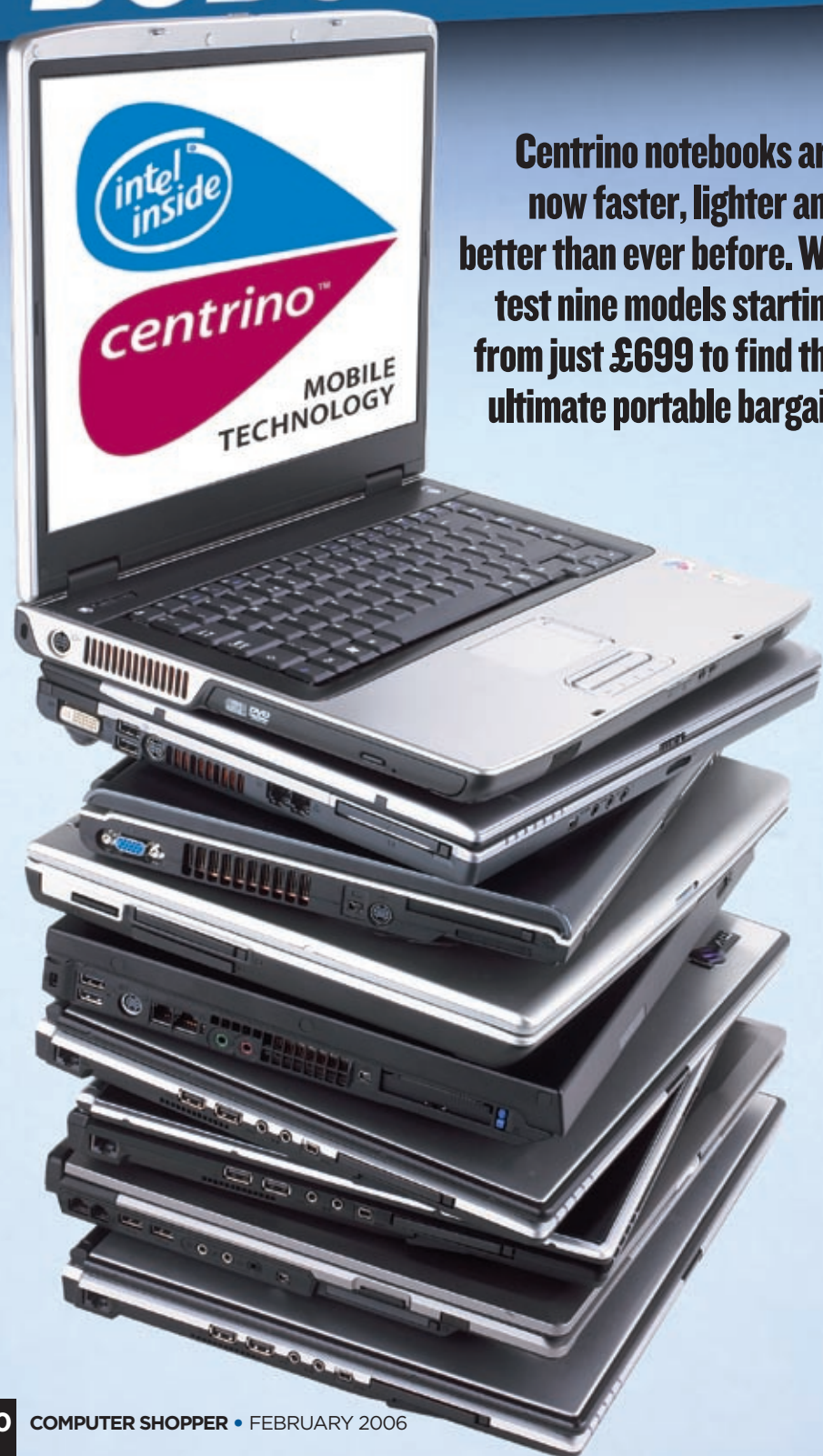


**REVEALED!**

THE ULTIMATE BUDGET NOTEBOOK



Centrino notebooks are now faster, lighter and better than ever before. We test nine models starting from just £699 to find the ultimate portable bargain

Just a few years ago, price-conscious consumers looking for a decent Windows computer were limited to bulky desktop systems. Notebooks, particularly those that used Intel's Centrino technology, were expensive business tools. Today prices have fallen dramatically, and it's possible to pick up a slim, wireless-ready notebook computer for under £800.

This month we asked nine leading notebook manufacturers to send us a notebook with Intel's Centrino technology at a bargain price. They responded by submitting notebooks that cost as little as £699 including VAT. The Centrino standard ensures that each one has wireless networking and an energy-efficient Pentium M processor.

We were amazed at the variety of features on offer at such low prices. Widescreen displays with gloss coatings, dedicated graphics chipsets for games, memory card readers and built-in webcams are all available. Whether you want a business notebook that runs for hours on a battery, a slim notebook that's ready for playing games or a family computer that can be used anywhere in the home, we'll help you find the ideal notebook at a bargain price.

IN THIS REVIEW

AJP M551G-E
Asus A3AC-5001H
Evesham Voyager C520
Gateway MX6635b
Hi-Grade Notino C7000L-1700
Lenovo ThinkPad R52 UJ369UK
Mesh Dynamo 1170
MV Mobeus 15" 1.73 CS
Toshiba Satellite M50-130



CHOOSING A... CENTRINO NOTEBOOK

With a Centrino notebook, you can look forward to long battery life, wireless networking and quiet operation from your notebook. Follow our guide to make sure you end up with everything you need

The notebooks in this group are inexpensive, with prices ranging from £699 to £799 including VAT, but that doesn't mean you need to compromise on quality. At these prices you should expect a well-built notebook that's more than capable of handling everyday computing tasks. You can also expect useful features such as a DVD writer, large hard disk and perhaps even a dedicated graphics card. Choose a notebook with features that suit the kind of tasks you want to perform.

WIDE BOYS

One of the most important parts to consider is the display. However you use your notebook, a good display will help and a poor one will hinder you.

The first decision is whether to choose a standard or widescreen display. Three notebooks in this group, from Gateway, Evesham and Toshiba, have widescreen displays. These are ideal for watching DVDs. Resolutions are generally quite high – 1,280x800 for most – but the shape isn't ideal for some office applications. Gateway and Toshiba have used gloss-coated screens. These increase contrast but are annoying to use under office lights because of reflections.

Of the remaining six notebooks, four have standard 1,024x768 displays. This resolution is fine for everyday use, but it can seem cramped if you use complex applications such as video-editing software. The notebooks from Asus and AJP have high-resolution 1,400x1,050-pixel displays which provide more desktop space.

TOUCHY-FEELY

Many notebook users connect a mouse and external keyboard when working at a desk. Even if this is the case, however, you're likely to use



▲ **Widescreen displays are perfect for watching DVDs, while glossy screens improve contrast but can suffer from reflections under bright office lighting**

the built-in keyboard and touch pad from time to time when travelling.

We thoroughly tested the keyboard and touch pad of every notebook in this test, and we found a surprising variation in quality. If you plan to use your notebook's keyboard often, make sure you choose one that's comfortable.

ANY PORT IN A STORM

Not long ago, many notebooks had very few ports and connectors. In this test, though, all but two of the notebooks have at least four USB2.0 ports. Many have useful extras such as an S/PDIF digital audio output or a fast Gigabit Ethernet connection. Three have built-in Bluetooth adaptors, making it easy to connect to the internet through a modern mobile phone or synchronise data with a PDA.

Memory card readers are common, and save you having to find the USB lead for your digital camera. Check the table on page 158 to see which notebooks support the cards your camera uses.

DISK JOCKEY

Most modern desktop computers have a hard disk that can hold at least 160GB of data, but notebook disk drives lag some way behind these. The Lenovo, Evesham and AJP notebooks in this group all have small, 40GB drives. These will be fine for most users, but if you plan to install a lot of software, work with video files or store lots of multimedia content, you could run out of space easily. The 60GB or 80GB disks used by Asus, Hi-Grade, Mesh, MV and Toshiba are better, and Gateway's notebook has a huge 100GB disk.

If you run out of space, you'll probably want to transfer your files to a CD or DVD. Most notebooks

in this group have an optical drive that can write to DVDs, but the Lenovo and Evesham computers can write only to CD-R and CD-RW discs.

BATTERY HENS

All the notebooks in this group can connect to a wireless network, so if you have a broadband connection and a wireless router, you can browse the web from anywhere in your house. This is great, but unless your notebook has a good battery you'll be forced to carry around a power supply as well, which is not ideal if you'd planned an afternoon of working with your laptop in the garden.

We ran a battery test that simulates light use on each notebook. If you are working on a Word document or reading a web page, you should be able to run each notebook for a period of time similar to that it achieved in our battery test (see page 156) before it runs out of power. If you're doing more strenuous work, the battery will run out more quickly. Our results show that only three notebooks in this group are really suited to regular portable use. The Hi-Grade and Gateway models ran for over three hours, and Lenovo's ThinkPad can run for over four hours on a single charge.

If you are planning to use your notebook away from home or the office, build quality becomes a key consideration. All the notebooks in this group are sturdy enough to survive a few knocks round the house, but daily use on the road is a tougher prospect. Lenovo's ThinkPad and Asus's A3AC-5001H feel particularly solid and would be good choices if you want a notebook for travel.

Finally, make sure that your notebook can be upgraded in future. Our table on page 158 shows which have a free memory slot, making it easy to increase their performance in a year or two.



Adding more memory is a simple way to increase your notebook's power. Look for one with a free memory slot.



Many notebooks have memory card slots, which make transferring photos from your digital camera easy



AJP M551G-E

RATING ★★

PRICE £750 inc VAT

SUPPLIER AJP 020 8208 9744

DETAILS www.ajp.co.uk

Three of the notebooks in the group are based on this chassis. AJP's version has a high-resolution display, but not much memory.

FEATURES

The slim chassis is finished in an attractive semi-gloss black. Opening the lid is harder than it should be, as the button doesn't always fully release the catches. It has four USB ports, which are conveniently split into pairs on either side of the case. AJP has fitted a small 40GB hard disk.

The keyboard has little travel and poor feedback, so anyone who does a lot of typing should avoid this notebook. The touch pad is no better. It's inaccurate and the buttons barely move when pressed.

The display has a resolution of 1,400x1,050 pixels. This is higher than every other notebook here except Asus's, and gives more workspace than a 17" desktop LCD monitor. The screen has no discernible grain, but white areas had a slight green tinge. Our colour wheel test showed smooth transitions, but also a lack of vibrancy.

AJP has built in a 1.3-megapixel webcam above the display. Its image quality isn't great, but it is sufficient for video chatting.

PERFORMANCE

The AJP performed poorly in the *Shopper* benchmark tests, as it's the only notebook here with a meagre 256MB of RAM. It suffered particularly in our memory-intensive image-manipulation test, scoring only 18, and scored 56 overall. It will suffice for everyday office tasks, but every other notebook here is more powerful. Its battery lasted just 142 minutes, and it's not suitable for playing modern 3D games.

VERDICT

AJP's notebook suffers by comparison to others in this very competitive group. If you want a high-resolution display and a built-in webcam the Asus A3AC is a better buy.

✓ High-resolution display; built-in webcam

✗ Poor performance; sub-standard touch pad and keyboard; short battery life

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 256MB RAM, 40GB hard disk, Intel GMA 900 integrated graphics, DVD+/-RW DL, 15" LCD



ASUS A3AC-5001H

RATING ★★★★★

PRICE £749 inc VAT

SUPPLIER Asus 020 7720 0820

DETAILS <http://uk.asus.com>

This is a well-built notebook with a great display, but its average battery life means there are better choices for everyday portable use.

FEATURES

The first thing that struck us about the A3AC was its display, which is easily the best non-widescreen model here. Its 1,400x1,050 resolution provides lots of space for running complex applications. There is no graininess, and whites were bright with only the slightest hint of blue. Colours were vibrant and transitions smooth between shades.

The silver chassis is well built and barely flexes at all. It has four USB ports, Bluetooth and a memory card reader that supports MMC, SD and MS cards. Above the display is a built-in 1.3-megapixel webcam with integrated microphone. The speakers are fairly good, and dedicated audio controls on the front enable you to listen to a CD without booting Windows.

The keyboard is solid with good travel and positive feedback. The return key is rather small, but we adjusted to it quickly. The touch pad is large and accurate, and a two-year international warranty is included.

PERFORMANCE

All the notebooks in this group use Intel Pentium M 740 processors, so their performance in Windows applications is similar. The A3AC's DVD writer excelled in our audio-encoding test, though, so its score of 84 is better than most.

Unfortunately its 165-minute battery life is only average. The notebooks from Gateway and Lenovo are good alternatives if you want to travel extensively with your notebook.

VERDICT

Asus has provided a well-built notebook with a high-resolution screen and good connectivity. If you don't want a widescreen display and don't need a long battery life, this is a great choice.

✓ Excellent high-resolution display; great build quality; webcam

✗ Average battery life

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 512MB RAM, 60GB hard disk, Intel GMA 900 integrated graphics, DVD+/-RW +/-DL, 15" LCD



EVESHAM Voyager C520

RATING ★★★★★

PRICE £768 inc VAT

SUPPLIER Evesham 08701 609500

DETAILS www.evesham.com

Evesham's Voyager is the best notebook in the group for 3D games. It's one of only two here with a dedicated graphics chip.

FEATURES

The Voyager doesn't look fancy. It's chunky, but build quality is very good. Its chassis is solid and doesn't flex at all. The firm keyboard is flanked by the best speakers in the group. The touch pad is accurate but could have been bigger, and the single rocking button is a daft design quirk.

Above the keyboard is a 15.4" widescreen display with a native resolution of 1,280x800 pixels. This makes it ideal for watching DVDs. It performed well in our greyscale and colour wheel tests and is great for games.

Less impressive, however, is the limited storage. The hard disk holds just 40GB of data, and with no DVD writer it will be tricky to store large amounts of data or backups on disc.

PERFORMANCE

The Voyager performed decently in our application benchmarks. An overall score of 78 puts it near the bottom of the group, but there is little difference between it and the other notebooks here that have 512MB of RAM.

In 3D it's an entirely different story. The nVidia GeForce Go 6600 graphics chip scored a respectable 5,432 in 3DMark03. We ran a tough Doom 3 test on it, and it managed a playable 28fps. With anti-aliasing disabled it ran the same test at 61.1fps. It can handle the latest games as long as you keep the detail levels down.

However, the powerful 3D chipset has a negative impact on battery life and the Voyager lasted just 111 minutes in our test.

VERDICT

The Voyager's 3D power is unrivalled in this group. If you want to play games it's easily the best choice, but its limited storage options and poor battery should dissuade other buyers.

✓ Good 3D performance; very solid chassis

✗ Limited storage; more expensive than most

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 512MB RAM, 40GB hard disk, nVidia GeForce Go 6600 graphics, CD-RW/DVD combo, 15.4" LCD



GATEWAY MX6635b



RATING ★★★★★

PRICE £699 inc VAT

SUPPLIER Comet 08705 425425

DETAILS www.comet.co.uk

Gateway's notebook is well designed and has fantastic specifications. Its great screen, memory card reader and ample RAM make it ideal for photo work.

FEATURES

This notebook looks good and is well built. Blue indicator lights complement the silver finish, and there is little flex in the chassis. The keyboard is responsive and springy, and only Toshiba's is better. The touch pad is great – it's accurate and shaped to match the widescreen display.

The MX6635b provides all the ports and slots you need, including four USB ports and a memory card reader. The speakers are not very loud and lack treble, but they sound clear. The 100GB hard disk is the biggest in the group.

The 15.4" widescreen display, with a native resolution of 1,280x800 pixels, is excellent. It produced a bright white screen with no coloured tint, smooth greyscales and vibrant colours. It has a glossy finish that improves contrast, but is unsuitable for use under office lighting due to reflections. It's an ideal screen for watching DVDs or photo editing.

PERFORMANCE

Despite its low price the MX6635b is the only notebook here with 1GB of RAM. This nudged it just ahead of the competition in our benchmarks. It scored 90 in our image-manipulation test, and 88 overall.

Like most notebooks in this group, the MX6635b is unsuitable for modern 3D games and scored just 841 in our 3DMark03 test. Its battery, on the other hand, lasted a good 227 minutes in our low-usage test. Only the ThinkPad is considerably better for use on the road.

VERDICT

With one of the lowest prices in the group and one of the highest specifications, this is a bargain. It's the best in the group unless you play games.

✓ Great performance; excellent display; bargain price

✗ Glossy display is unsuitable for use under office lighting

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 1GB RAM, 100GB hard disk, Intel GMA 900 integrated graphics, DVD+/-RW DL, 15.4" LCD



HI-GRADE Notino C7000L-1700

RATING ★★★

PRICE £750 inc VAT

SUPPLIER Hi-Grade 020 8532 6111

DETAILS www.higrade.com

The Notino has a good battery and is fairly powerful, but its keyboard isn't good enough.

FEATURES

Hi-Grade's silver chassis is worryingly flexible compared with others in this group. Its DVD writer is in the front of the chassis, rather than the side, and ejects towards you. This can be useful when travelling, especially by aircraft.

The touch pad is fairly accurate, but the buttons provide little feedback. The keyboard is worse, and flexes as you type, while the keys feel rather limp and don't travel as far as we'd like. Five short cut keys on the left of the keyboard can be set up to launch favourite applications. The speakers above the keyboard sound tinny.

The 15" 1,024x768 display gave mixed results in our tests. The white screen test showed a pronounced graininess, and the backlight was a little uneven, producing grey patches. It produced a very smooth and well-graduated greyscale, but colours looked rather washed out. We wouldn't recommend this display for colour-sensitive work such as photo manipulation.

PERFORMANCE

The Notino performed respectably in our application benchmarks. It scored 81 overall in the *Shopper* benchmarks and will make short work of day-to-day tasks.

Like the other notebooks in the group that use Intel's GMA 900 integrated graphics, the Notino isn't up to running the latest 3D games. Its battery life is much better than most, though. It ran for over three-and-a-half hours in our light-use test, losing out only to the ThinkPad.

VERDICT

The Notino is reasonably powerful and has a good battery, but its display isn't great and its keyboard is poor. If you need a notebook with good battery life, Gateway's MX6635b and Lenovo's ThinkPad are both better options.

✓ Good battery life

✗ Poor keyboard; display not great

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 512MB RAM, 60GB hard disk, Intel GMA 900 integrated graphics, DVD+/-RW +/-DL, 15" LCD



LENOVO ThinkPad R52 UJ369UK

RATING ★★★

PRICE £740 inc VAT

SUPPLIER www.laptopsdirect.co.uk

DETAILS www.lenovo.com

The ThinkPad's black chassis looks dour, but it has the best battery here and is a good choice if you want a notebook for business use.

FEATURES

The ThinkPad's chassis is well constructed, which is essential for a travelling business notebook. The standard touch pad is complemented by a touch stick in the middle of the keyboard. It has only two USB ports, but Bluetooth is included.

The lid forms a small hood around the top of the display, protecting it from knocks and scratches. The display isn't the brightest we've seen, but the backlight is even and not grainy. For office applications it's more than sufficient. There is even a small light built into the top of the display in case you need to type in the dark.

The 40GB hard disk will suffice for office use, but it could easily fill up if you use your computer to store media files. Like Evesham's Voyager, the ThinkPad has a CD-RW/DVD combo drive rather than a DVD writer. With Windows XP Professional installed it can connect to a corporate network easily.

PERFORMANCE

Its Intel Pentium M 740 processor and 512MB of RAM helped the ThinkPad score an average 80 in the *Shopper* application benchmarks. Like most notebooks here it is incapable of playing the latest 3D games.

The ThinkPad has the best battery in this group. It ran for over four hours in our low-usage test, so it should last for an entire morning or afternoon of office work when you're away from a power socket.

VERDICT

If you need a sturdy business notebook for use on the road, the Lenovo fits the bill. It isn't as well specified as Gateway's or Asus's notebooks, but its durability and battery life will be more important to some.

✓ Fantastic battery life; Windows XP Professional

✗ No DVD writer; small hard disk

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 512MB RAM, 40GB hard disk, Intel GMA 900 integrated graphics, CD-RW/DVD combo, 15" LCD



MESH Dynamo 1170

RATING ★★★★★

PRICE £699 inc VAT

SUPPLIER Mesh Computers 08700 464747

DETAILS www.meshcomputers.com

The Dynamo uses the same chassis as AJP's M551G-E, but a lower-resolution display. Its hard disk is bigger, though, and its battery lasts longer.

FEATURES

Mesh has used a silver chassis with black trim. It's slightly flexible, and the keyboard and touch pad, which are identical to the AJP's, are not very comfortable to use. All the usual ports are provided, including four USB connectors.

A useful built-in card reader supports SD, MMC and MS formats, and Mesh has fitted a two-layer DVD drive. A large, 80GB hard disk is also installed, along with CyberLink's handy PowerCinema 4 software.

The lid is fitted with a built-in 1.3-megapixel webcam, but unlike AJP's notebook the Dynamo's display has a resolution of just 1,024x768 pixels. It performed reasonably well in our greyscale and colour-transition tests, but it isn't particularly bright and has narrow viewing angles. A two-year warranty is included.

PERFORMANCE

With 512MB of RAM and an Intel Pentium M 740 processor, the Mesh's performance was similar to that of most of the notebooks in this group. It scored 79 overall in our application benchmarks. Its battery lasted for 165 minutes, which won't get you through a whole afternoon of work. The Gateway, Hi-Grade and Lenovo notebooks are better for working on the move.

Like other notebooks here, the Dynamo uses an Intel GMA 900 graphics chip. It will play older games, but its score of 1,082 in 3DMark03 shows that it can't cope with the latest 3D titles.

VERDICT

Like the similar notebook from AJP, Mesh's Dynamo is let down by a poor keyboard and touch pad. Its large hard disk is useful and its battery life is acceptable, but it can't compete with the identically priced Gateway.



Lots of useful ports; low price; generous disk



Sub-standard keyboard and touch pad; average battery life

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 512MB RAM, 80GB hard disk, Intel GMA 900 integrated graphics, DVD+/-RW DL, 15" LCD



MV Mobeus 15" 1.73 CS

RATING ★★★★★

PRICE £755 inc VAT

SUPPLIER MV 08718 554668

DETAILS www.go-mv.com

MV's Mobeus has the same chassis as the AJP and Mesh notebooks, but costs more than either of them without offering any extra features.

FEATURES

Except for the MV logo this notebook looks identical to Mesh's Dynamo. Like the AJP and Mesh models, its keyboard and touch pad are frustrating to use. The chassis itself is quite slim, though, and provides a good variety of ports. All the notebooks based on this chassis have a mini-jack S/PDIF output for surround sound.

Like Mesh's notebook, the Mobeus has a 1,024x768 display, but unlike the Mesh and AJP notebooks there is no webcam above the screen. The screen itself is acceptable but not very bright and has limited viewing angles. MV has fitted a two-layer DVD writer, which is useful for backing up large amounts of data or burning home videos to disc, but the 60GB hard disk is smaller than Mesh's 80GB model.

PERFORMANCE

With the same Pentium M processor as every other notebook in the group and an unremarkable 512MB of RAM, it's not surprising that the Mobeus is only averagely fast. It scored 79 overall in our application benchmarks. Its battery ran for an unremarkable 165 minutes in our light-usage test, so it's not ideal for use on the move.

Like every other notebook with an Intel GMA 900 graphics processor, this notebook is unsuitable for playing recent 3D games. If you want to get stuck into Doom 3 we'd recommend Evesham's Voyager or Toshiba's Satellite.

VERDICT

MV's notebook has the same chassis – and, unfortunately, the same poor keyboard and mouse – as Mesh's Dynamo. As it costs more and has a smaller hard disk and no webcam, it's difficult to recommend.



Lots of useful ports



Expensive; sub-standard keyboard and touch pad; average battery life

SPECIFICATIONS 1.73GHz Intel Pentium M 740, 512MB RAM, 60GB hard disk, Intel GMA 900 integrated graphics, DVD+/-RW DL, 15" LCD



TOSHIBA Satellite M50-130

RATING ★★★★★

PRICE £799 inc VAT

SUPPLIER Micro Anvika 020 7467 6050

DETAILS www.microanvika.com

The Toshiba is very compact and stylish. Its widescreen display and media capabilities make it a good choice for home entertainment.

FEATURES

The Toshiba's solid chassis is wide but not very deep. This is due to its 1,280x768 widescreen display. The keyboard is the best in this group, with plenty of travel and good tactile feedback. Bluetooth is also included.

To the right of the keyboard are DVD and CD controls. The notebook can play both without booting into Windows. The software is well designed and DVD playback looks good on the widescreen display.

The display's gloss coating improves contrast, but colours lacked vibrancy and we could see graininess in white areas. It's OK, but not as good as we'd hoped.

PERFORMANCE

The Satellite scored well in our application benchmarks. Its score of 86 overall was marginally better than those of the other notebooks with 512MB of RAM, and just behind the Gateway MX6635b. Its battery is one of the worst in the group, though, and lasted just 139 minutes in our low-usage test. It couldn't play a two-hour DVD on one battery charge.

This is one of just two notebooks in the group with a dedicated 3D graphics processor. Its Radeon X600SE chip isn't as powerful as Evesham's GeForce Go 6600, but it ran Doom 3 at over 30fps in medium quality at 800x600. It's not good enough for keen gamers, but powerful enough for the odd round of virtual golf.

VERDICT

The Satellite is the most expensive notebook here, and the cheaper Gateway is more powerful. Its battery is also disappointing. However, its excellent keyboard, graphics processor and handy multimedia features are definite plus points.



Compact chassis; plays DVDs without booting into Windows



Expensive; limited battery life

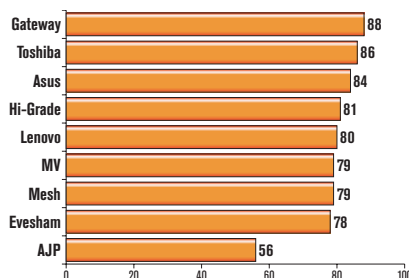
SPECIFICATIONS 1.73GHz Intel Pentium M 740, 512MB RAM, 60GB hard disk, ATI Mobility Radeon X600SE graphics, DVD+/-RW DL, 14" LCD



BENCHMARKS

2D Performance **Shopper application tests**

Overall



Video-Encoding Test

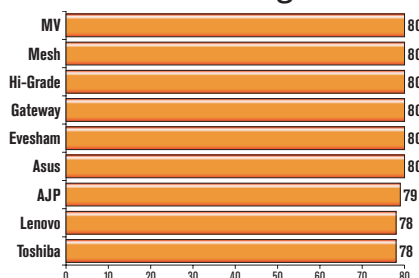
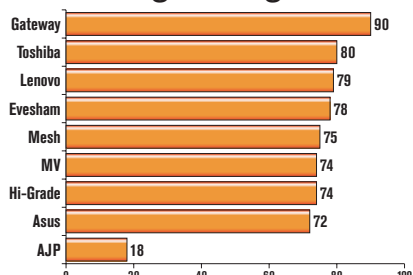


Image-Editing Test



SETTINGS We run our application tests at 1,024x768 resolution and in 32-bit colour
WEB www.computershopper.co.uk

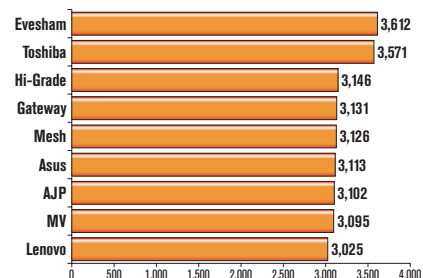
Computer Shopper's 2D benchmarks are designed to show how PCs stand up to the toughest tasks Windows can throw at them. Today's PCs have no problem running office applications such as Word and Excel, so we have chosen to focus our tests on areas where you could experience difficulties.

In version 1.0 there are three scripts. Encoding a short video to MPEG 2 format is an extremely processor-intensive task, and one that anyone interested in transferring home videos to DVD will have to tackle. Our image-editing test simulates a session of photo enhancement using Paint Shop Pro, culminating with the memory-intensive composition of a panorama from a set of digital snaps. Finally, a set of MP3s is generated by ripping an audio CD.

We compiled all the tests with the help of our sister magazine for performance computing, *Custom PC*. By tackling advanced tasks the tests will give you warning of any speed issues you could encounter. Figures are relative to a reference Evesham Athlon 64 3500+ system, which scores 100 in all tests.

PCMark04

PCMark04



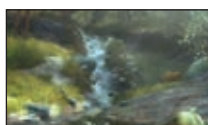
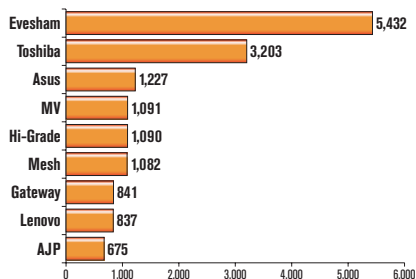
SETTINGS We run PCMark04 at 1,024x768 resolution and in 32-bit colour
WEB www.futuremark.com

As well as our own benchmarks, we test all desktop and notebook PCs using Futuremark's PCMark04. You can download a free version of PCMark04 from www.futuremark.com/download, so you can compare our results with those from your own computer, which is useful if you want to see how much performance you might gain by upgrading.

PCMark04 performs a variety of tests to measure system performance. These include testing the hard disk, memory, processor and graphics. All the tests mimic the stresses placed on your computer by actual applications, giving a fair indication of how powerful a PC is.

3D Performance **3DMark03**

3DMark03

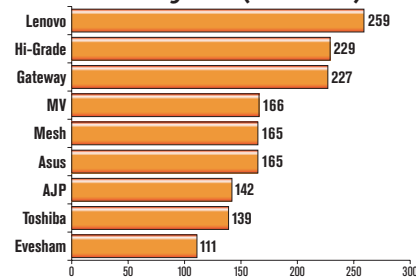


SETTINGS 1,024x768 resolution, 32-bit colour, default settings
WEB www.futuremark.com

3DMark03 comprises four game tests from four different genres. Each test involves real-time rendering of a 3D environment. 3DMark03 gives you a good idea of how well a PC will run games that are currently on the market. You can download a free limited version of 3DMark03 from the Futuremark website.

Portability

MobileMark2002 battery life (minutes)



LABS VERDICT **CENTRINO NOTEBOOKS**

This is one of the tightest group tests we've had in recent months, with every notebook using the same processor and offering a similar level of power. Despite these similarities, however, some are significantly better value than others, and four stand out.

If you want to play games, Evesham's Voyager is the best choice. Its GeForce Go 6600 graphics chip can play even the latest games at reasonable levels of detail, but with a small

hard disk and no DVD writer it's not a great general-purpose notebook. Similarly, Lenovo's ThinkPad R52 is ideal only if you want a notebook with a good battery for business use.

Asus's A3AC-5001H is a great general-purpose notebook, but is bettered by one of the cheapest computers in the group. Gateway's MX6635b has more memory than the rest, a huge hard disk and a great screen. At just £699 including VAT it's the ultimate budget notebook, and it wins our Best Buy award.

GATEWAY MX6635b





MANUFACTURER	AJP	ASUS	EVESHAM	GATEWAY	
Model	M551G-E	A3AC-5001H	Voyager C520	MX6635b	
Rating	★★	★★★★★	★★★★★	★★★★★	
Processor	Intel Pentium M 740	Intel Pentium M 740	Intel Pentium M 740	Intel Pentium M 740	
Speed	1.73GHz	1.73GHz	1.73GHz	1.73GHz	
Memory installed	256MB	512MB	512MB	1GB	
Memory slots (free)	2 (1)	2 (1)	2 (0)	2 (0)	
Max memory	2GB	2GB	2GB	2GB	
BIOS	Phoenix	AMI	Insyde	Phoenix	
Dimensions (HxWxD)	41x332x279mm	41x328x284mm	41x251x353mm	38x263x356mm	
Weight	2.65kg	2.95kg	2.8kg	2.8kg	
Sound	Realtek HD audio	Realtek HD audio	Realtek AC'97	Conexant AMC audio	
Pointing device	Touch pad	Touch pad	Touch pad	Touch pad	
DISPLAY					
Screen size	15"	15"	15.4"	15.4"	
Graphics adaptor	Intel GMA 900 integrated	Intel GMA 900 integrated	nVidia GeForce Go 6600	Intel GMA 900 integrated	
Graphics outputs	D-sub, S-video	D-sub, S-video	DVI, S-video	D-sub, S-video	
Graphics memory	128MB shared	128MB shared	128MB	128MB shared	
Native resolution	1,400x1,050	1,400x1,050	1,280x800	1,280x800	
STORAGE					
Hard disk (available)	40GB (37.2GB)	60GB (55.9GB)	40GB (37.2GB)	100GB (93.2GB)	
Optical drive	DVD +/-RW DL	DVD +/-RW +/- DL	CD-RW/DVD combo drive	DVD +/-RW DL	
Optical drive speeds	8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 2.4X DVD+R DL, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM	8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 2.4X DVD+R DL, 2.4X DVD-R DL, 5X DVD-RAM, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM	24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM	8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 2.4X DVD+R DL, 24X CD-R, 10X CD-RW, 8X DVD-ROM, 24X CD-ROM	
Floppy disk	£34 inc VAT	No	No	No	
PORTS & EXPANSION					
USB2 ports	4	4	4	4	
FireWire	1	1	1	1	
Infrared port	No	Yes	No	No	
Bluetooth	No	Yes	No	No	
Networking	10/100/1,000 wired, 802.11b/g	10/100 wired, 802.11b/g	10/100 wired, 802.11b/g	10/100 wired, 802.11b/g	
CardBus slots	1	1	1	1	
Modem	Yes	Yes	Yes	Yes	
Legacy ports	None	Serial	None	None	
Other ports	Mini-jack S/PDIF out, memory card reader (supports Secure Digital, MultiMedia Card, Memory Stick)	Mini-jack S/PDIF out, memory card reader (supports Secure Digital, MultiMedia Card, Memory Stick)	Mini-jack S/PDIF out, memory card reader (supports Secure Digital, MultiMedia Card, Memory Stick)	Memory card reader (supports Secure Digital, MultiMedia Card, Memory Stick)	
EXTRAS					
Carrying case	Yes	Yes	No	No	
Direct CD control	No	Yes	No	No	
Operating system	Windows XP Home	Windows XP Home	Windows XP Home	Windows XP Home	
Operating system restore option	Windows CD	Restore CD	Restore CD	Restore DVD and partition	
Software included	Nero Utility Suite 3	Norton Internet Security 2005	Microsoft Works 8, Roxio Easy Media Creator 7, BullGuard Anti-virus 5	Microsoft Works 8, Microsoft Money 2005, CyberLink PowerDVD 6, Nero Suite 6	
Other standard accessories	Built-in 1.3MP webcam	Optical mouse, built-in 1.3MP webcam	None	None	
Optional extras	Built-in Bluetooth £57, battery charger £57, battery bridge £22, additional battery £116, port replicator £57	None	None	None	
BUYING INFORMATION					
Company founded	1986	1989	1983	1985	
Employees	35	40,000	418	Not disclosed	
Tech support staff	7	6 (UK)	84	Not disclosed	
Tech support times	Mon-Fri 9am-5pm, Sat 9am-2pm	Mon-Fri 8.30am-5.30pm	Mon-Sat 9am-5.30pm	Mon-Fri 9am-8pm, Sat 9am-6pm, Sun 10am-6pm	
Parts and labour warranty	One year RTB	Two years international collect and return	One year RTB	One year collect and return	
Price inc VAT and delivery	£750	£749	£768	£699	
Price ex VAT and delivery	£599	£638	£654	£556	
Details	www.ajp.co.uk	http://uk.asus.com	www.evesham.com	www.uk.gateway.com	
Supplier	AJP	Asus	Evesham Computers	Comet	
Phone	020 8208 9744	020 7720 0820	08701 609500	08705 425425	
Web address	www.ajp.co.uk	www.asuslaptop.co.uk	www.evesham.com	www.comet.co.uk	



HI-GRADE	LENOVO	MESH	MV	TOSHIBA
Netino C7000L-1700	ThinkPad R52 UJ369UK	Dynamo 1170	Moebius 15" 1.73 CS	Satellite M50-130
★★★	★★★	★★★★	★★★	★★★
Intel Pentium M 740	Intel Pentium M 740	Intel Pentium M 740	Intel Pentium M 740	Intel Pentium M 740
1.73GHz	1.73GHz	1.73GHz	1.73GHz	1.73GHz
512MB	512MB	512MB	512MB	512MB
2 (0)	2 (1)	2 (0)	2 (0)	1 (1)
1GB	2GB	2GB	2GB	2GB
Phoenix	IBM	Phoenix	Phoenix	Phoenix
42x327x273mm	42x331x265mm	41x332x279mm	41x332x279mm	36x342x240mm
2.7kg	2.95kg	2.65kg	2.65kg	2.45kg
Realtek AC'97	SoundMAX integrated digital audio	Realtek HD audio	Realtek HD audio	Realtek AC'97
Touch pad	Touch pad and touch stick	Touch pad	Touch pad	Touch pad
15"	15"	15"	15"	14"
Intel GMA 900 integrated	Intel GMA 900 integrated	Intel GMA 900 integrated	Intel GMA 900 integrated	ATI Mobility Radeon X600SE
D-sub, S-video	D-sub, S-video	D-sub, S-video	D-sub, S-video	D-sub, S-video
64MB shared	128MB shared	128MB shared	128MB shared	64MB + 64MB shared
1,024x768	1,024x768	1,024x768	1,024x768	1,280x768
60GB (55.9GB)	40GB (37.2GB)	80GB (74.5GB)	60GB (55.9GB)	60GB (55.9GB)
DVD +/-RW +/-DL	CD-RW/DVD combo drive	DVD +/-RW DL	DVD +/-RW DL	DVD +/-RW DL
8X DVD+R, 8X DVD-R, 8X DVD+RW, 4X DVD-RW, 4X DVD+R DL, 4X DVD-R DL, 24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM	24X CD-R, 24X CD-RW, 8X DVD-ROM, 24X CD-ROM	8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 2.4X DVD+R DL, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM	8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 2.4X DVD+R DL, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM	8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 2.4X DVD+R DL, 24X CD-R, 16X CD-RW, 8X DVD-ROM, 24X CD-ROM
No	£49 inc VAT	£34 inc VAT	£35 inc VAT	£41 inc VAT
3	2	4	4	4
1	1	1	1	1
No	No	No	No	No
No	Yes	No	No	Yes
10/100 wired, 802.11b/g	10/100/1,000 wired, 802.11b/g	10/100/1,000 wired, 802.11b/g	10/100/1,000 wired, 802.11b/g	10/100 wired, 802.11b/g
1	1	1	1	1
Yes	Yes	Yes	Yes	Yes
None	Parallel	None	None	None
Mini-jack S/PDIF out, memory card reader (supports Secure Digital, MultiMedia Card, Memory Stick, xD)	None	Mini-jack S/PDIF out, memory card reader (supports Secure Digital, MultiMedia Card, Memory Stick)	Mini-jack S/PDIF out, memory card reader (supports Secure Digital, MultiMedia Card, Memory Stick)	Memory card reader (supports Secure Digital, XD, Memory Stick)
Yes	No	Yes	Yes	No
No	No	No	No	No
Windows XP Home	Windows XP Professional	Windows XP Home	Windows XP Home	Windows XP Home
Restore partition	Restore partition	Restore CD	Windows CD and driver CD	Restore CD
BullGuard 3.0, Sonic RecordNow! 7, OpenOffice.org 2	Norton AntiVirus 2004	Microsoft Works 8, CyberLink Power2Go 4, PowerProducer 3, PowerDirector 3, PowerBackup 1.1, PowerCinema 4, Medi@Show 3	Roxio Creator VCD 7, Microsoft Works 8, Sonic Cineplayer 6.987, BullGuard Anti-virus 6	Microsoft Works 8, Microsoft One Note 11.6360.6360, Sonic RecordNow! 7.31, WinDVD Creator 2 Platinum
None	None	Built-in 1.3MP webcam	None	None
Extra battery £111 inc VAT	Extra battery £101 inc VAT	None	Extra battery £117 inc VAT	Extra battery £69 inc VAT
1986	1984 (as Legend)	1987	1992	1985 (notebook division)
85	19,000	275	51	Not disclosed
10	Not disclosed	42	10	Not disclosed
Mon-Fri 9am-5.30pm	Mon-Fri 9am-5.30pm	Mon-Fri 9am-5.30pm	Mon-Fri 9am-5pm, Sat 10am-2pm	Mon-Fri 8am-6pm
One year collect and return	One year RTB	Two years RTB	One year collect and return	One year international collect and return
£750	£740	£699	£755	£799
£638	£630	£556	£624	£680
www.hi-grade.com	www.lenovo.com	www.meshcomputers.com	www.go-mv.com	www.toshiba.co.uk
Hi-Grade	Laptops Direct	Mesh Computers	MV	Micro Anvika
020 8532 6111	08701 670818	08700 464747	08718 554668	020 7467 6050
www.hi-grade.com	www.laptopsdirect.co.uk	www.meshcomputers.com	www.go-mv.com	www.microanvika.com